

## MONECPHORA BICINCTA (SAY) IN NEW ENGLAND.

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The black frog-hopper or spittle-bug, *Monecphora bicincta* var. *ignipecta* Fitch, is a common insect locally in New England (Wellesley,—A. P. M.; Dedham and Bridgewater, Mass., and Squam Lake, N. H.—Boston Soc. Nat. Hist.) and I have an example from Harrisburg, Pa. From southern New Jersey (t. C. W. Johnson) southward its place is taken by the typical banded form (*M. bicincta*), marked by several narrow transverse vermilion stripes, of which the two crossing the elytra are especially noticeable.

Van Duzee records the species (Cat. Hemipt., p. 509) from sixteen states (Mass. to Iowa, Fla., Tex., also Mex. and W. I.), but does not say which form is referred to.

During the past summer, while collecting orthoptera in Maine, I found the banded form at Norridgewock (Aug. 19) in the central western part of the state, and later took the unmarked variety at Naples, Norway, and several points between there and Norridgewock. Finding that the species was not reported by Prof. Osborn in his life-histories of the Cercopidæ of Maine, I paid more attention to it thereafter, and secured specimens at various additional points in southwestern Maine, including Gorham, Standish, Limington, Lyman, Sanford, Lebanon and Eliot. All were of the unmarked variety.

Why the banded form alone should be found at the Norridgewock locality, and only there (in New England), at the northern limit of the distribution of the species (as far as now known), is as yet an unsolved problem.

An examination of the material at the Museum of Comparative Zoology at Cambridge resulted in finding a single additional example from New England of the banded form, labeled, "Mass., S. Henshaw." Mr. Henshaw tells me that this was doubtless secured in Brookline, Mass., in the early period of his collecting.

So far as my memory recalls in the past, and certainly from

observations made this summer, this insect is associated with the bunch-grass (*Andropogon scoparius*) and feeds on its sap. This grass is often the dominant species on the sterile, gravelly soils of the coastal plain of New England and is widely distributed in the region inhabited by the insect. Adult insects were commonly observed (Aug. 19 to Sept. 18, 1920) perched upon the flowering stalks one to two feet from the ground. On one occasion the stalk was even plucked and the bug examined through a half-inch lens while still busily sucking, during which time, at irregular intervals (5 to 50 seconds) it discharged from its abdomen tiny droplets of a clear liquid.

Adults have been taken in New England from the last week in July till the latter part of September. They could not be found this year at Wellesley in mid-October, perhaps because the grass stems were then hard and dry. The young stages will probably be found, if looked for, in the leafy tufts that characterize the growth of this grass earlier in the season. All of the New England specimens which I have seen are decidedly smaller in size than those from the South.